Reply to Non-Final Office Action
Attorney Docket No.: NOR-091 (11499TCUS01U)
U.S. Serial No.: 09/645,186

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method for allocating a network resource to a data path having a predetermined priority, comprising:

selecting a network path having sufficient network resource available;

allocating the network resource to the data path when the selected network path has an acceptable cost; and

taking network resource from a network path having a priority lower than the predetermined priority when no network path having sufficient network resource and acceptable cost is selected.~~selecting a network path having a least number of hops to a destination;~~

~~determining if a sufficient amount of the network resource is available in the network path to accommodate the data path; and~~

~~deciding whether to allocate the network resource in the network path to the data path based on the amount of the network resource in the network path and the number of hops to the destination;~~

~~wherein if the network resource is not allocated to the datapath, the method is repeated one or more times, each time starting with selecting a network path having a progressively larger number of hops to the destination than a previous time.~~

2. (Original) The method of claim 1, wherein the network resource comprises bandwidth.

3. (Canceled)

4. (Canceled)

5. (Currently Amended) The method of claim 1, wherein the ~~number of hops~~ cost is obtained by reference to a topology database for determining a path between ~~the~~ a source and ~~the~~ a destination.
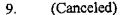
6. (Canceled)

7. (Canceled)

8. (Original) The method of claim 1, wherein the data path comprises a label switched path (LSP) on a multiprotocol label switching (MPLS) network.

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9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Canceled)

13. (Currently Amended) A method of configuring a label switched path (LSP) through a multiprotocol label switching (MPLS) network having a predetermined priority, the method comprising:

selecting a network path in the MPLS having sufficient network resource available;

allocating the network resource to the LSP when the selected network path has an acceptable cost; and

taking network resource from a network path having a priority lower than the predetermined priority when no network path having sufficient network resource and acceptable cost is selected.selecting a network path in the MPLS network that has a least number of hops to a destination;

determining if there is sufficient unused bandwidth on the network path to accommodate the LSP; and

allocating the unused bandwidth of the network path to the LSP if there is sufficient unused bandwidth available;

wherein if the unused bandwidth is not allocated to the LSP, the method is repeated one or more times, each time starting with selecting a network path having a progressively larger number of hops to the destination than a previous time.

14. (Currently Amended) The method of claim 13, wherein the cost is obtained by reference to a topology database for determining a path between a source and a destination. further comprising:

obtaining a cost associated with using the unused bandwidth on the network path for the LSP, the cost comprising a number of hops to the destination;

wherein allocating comprises using the unused bandwidth if the cost is below a predetermined maximum cost.

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15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Canceled)

19. (Canceled)

20. (Currently Amended) A computer program stored on a computer-readable medium for allocating a network resource to a data path having a predetermined priority, the computer program comprising instructions that cause a processor to:

select a network path having sufficient network resource available;

allocate the network resource to the data path when the selected network path has an acceptable cost; and

take network resource from a network path having a priority lower than the predetermined priority when no network path having sufficient network resource and acceptable cost is selected. select a network path having a least number of hops to a destination;

determine if a sufficient amount of the network resource is available in a network path to accommodate the data path;

decide whether to allocate the network resource in the network path to the data path based on the amount of the network resource in the network path and the number of hops to the destination; and

repeat selecting, determining and deciding one or more times if the network resource is not allocated to the datapath, each time using a network path having a progressively larger number of hops to the destination than a previous time.

21. (Original) The computer program of claim 20, wherein the network resource comprises bandwidth.

22. (Canceled)

23. (Canceled)

24. (Currently Amended) The computer program of claim 20, wherein the number of hops cost is obtained by reference to a topology database for determining a path between the a source and the a destination.

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25. (Canceled)

26. (Canceled)

27. (Original) The computer program of claim 20, wherein the data path comprises a label switched path (LSP) on a multiprotocol label switching (MPLS) network.

28. (Canceled)

29. (Canceled)

30. (Canceled)

31. (Canceled)

32. (Currently Amended) A computer program stored on a computer-readable medium for configuring a label switched path (LSP) through a multiprotocol label switching (MPLS) network having a predetermined priority, the computer program comprising instructions that cause a processor to:

select a network path in the MPLS having sufficient network resource available;

allocate the network resource to the LSP when the selected network path has an acceptable cost; and

take network resource from a network path having a priority lower than the predetermined priority when no network path having sufficient network resource and acceptable cost is selected.~~select a network path in the MPLS network that has a least number of hops to a destination;~~

~~determine if there is sufficient unused bandwidth on the network path to accommodate the LSP;~~

~~allocate the unused bandwidth of the network path to the LSP if there is sufficient unused bandwidth available; and~~

~~repeat selecting, determining, and allocating one or more times if the unused bandwidth is not allocated to the LSP, each time using a network path having a progressively larger number of hops to the destination than a previous time.~~

33. (Currently Amended) The computer program of claim 32, wherein the cost is obtained by reference to a topology database for determining a path between a source and a destination. ~~further comprising instructions that cause the processor to:~~

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~~obtain a cost associated with using the unused bandwidth on the network path for~~
~~the LSP, the cost comprising a number of hops to the destination;~~
~~wherein allocating comprises using the unused bandwidth if the cost is below a~~
~~predetermined maximum cost.~~

34.   (Canceled)

35.   (Canceled)

36.   (Canceled)

37.   (Canceled)

38.   (Canceled)

39.   (Currently Amended) An apparatus for allocating a network resource to a data path having a predetermined priority, the apparatus comprising circuitry which:

selects a network path having sufficient network resource available;

allocates the network resource to the data path when the selected network path has an acceptable cost; and

takes network resource from a network path having a priority lower than the predetermined priority when no network path having sufficient network resource and acceptable cost is selected. ~~selects a network path having a least number of hops to a destination;~~

~~determines if a sufficient amount of the network resource is available in a the network path to accommodate the data path;~~

~~decides whether to allocate the network resource in the network path to the data path based on the amount of the network resource in the network path and the number of hops to the destination; and~~

~~repeats selecting, determining and deciding one or more times if the network resource is not allocated to the datapath, each time a network path having a progressively larger number of hops to the destination than a previous time.~~

40.   (Original) The apparatus of claim 39, wherein the network resource comprises bandwidth.

41.   (Canceled)

42.   (Cancelled)

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43. (Currently Amended) The apparatus of claim 39, wherein the ~~number of hops~~ cost is obtained by reference to a topology database for determining a path between the source and the destination.

44. (Canceled)

45. (Canceled)

46. (Original) The apparatus of claim 39, wherein the data path comprises a label switched path (LSP) on a multiprotocol label switching (MPLS) network.

47. (Canceled)

48. (Canceled)

49. (Canceled)

50. (Canceled)

51. (Original) The apparatus of claim 39, wherein the circuitry comprises a memory which stores computer instructions and a processor which executes the computer instructions.

52. (Original) The apparatus of claim 39, wherein the circuitry comprises one or more of an integrated circuit and programmable logic.

53. (Currently Amended) An apparatus for configuring a label switched path (LSP) through a multiprotocol label switching (MPLS) network having a predetermined priority, the apparatus comprising circuitry which:

selects a network path in the MPLS having sufficient network resource available;

allocates the network resource to the LSP when the selected network path has an acceptable cost; and

takes network resource from a network path having a priority lower than the predetermined priority when no network path having sufficient network resource and acceptable cost is selected. ~~selects a network path in the MPLS network that has a least number of hops to a destination;~~

~~determines if there is sufficient unused bandwidth on a the network path to accommodate the LSP;~~

~~allocates the unused bandwidth of the network path to the LSP if there is~~

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~~sufficient unused bandwidth available; and~~

~~repeats selecting, determining, and allocating one or more times if the unused~~
~~bandwidth is not allocated to the LSP, each time using a network path having a progressively~~
~~larger number of hops to the destination than a previous time.~~

54.   (Currently Amended) The apparatus of claim 53, <u>wherein the cost is obtained by</u>
<u>reference to a topology database for determining a path between a source and a</u>
<u>destination.</u>~~wherein:~~

~~the circuitry obtains a cost associated with using the unused bandwidth on the~~
~~network path for the LSP, the cost comprising a number of hops to the destination; and~~
~~allocating comprises using the unused bandwidth if the cost is below a~~
~~predetermined maximum cost.~~

55.   (Canceled)

56.   (Canceled)

57.   (Canceled)

58.   (Canceled)

59.   (Canceled)

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